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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/032,062

12/31/2001

Yun Bok Lee

049128-5036

5647

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7590

06/21/2005

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EXAMINER

WARREN, MATTHEW E

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,062

Applicant(s)

LEE, YUN BOK

Examiner

Matthew E. Warren

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the RCE and Amendment filed on May 15, 2005.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US 6,271,903) in view of Kim (US 6,177,970 B1).

In re claim 1, Shim et al. shows (figs. 13 and 14) a liquid crystal display device having liquid crystal cells arranged in a matrix comprising a gate line (21) for receiving a scanning signal, a data line (signal line 31) for receiving a data signal, and a pixel electrode (29) provided at an intersection of the gate line and the data line to drive a liquid crystal cell. A thin film transistor (T) for responding to the scanning signal is used to switch the data signal into the pixel electrode. A common line (22) is formed laterally adjacent to the pixel electrode along a direction of the gate and data lines. An alignment film (not labeled-layer formed on top of source 27, drain, 28, and pixel electrode 29) is formed on at least a portion of the gate line, the data line and the pixel electrode to determine a primary alignment direction of a liquid crystal (an alignment layer is formed on the substrate to align the liquid crystal molecules-[col. 1, line 45-54 and col. 3, lines 4-12]). The alignment film contacts the source and drain electrodes (27 and 28) of the

TFT. Shin shows all of the elements of the claims except the alignment film contacting the common line. Kim shows (figs. 1 and 2) a liquid crystal display device having liquid crystal cells arranged in a matrix type, comprising a common line (310) laterally adjacent to the pixel electrode (810). An alignment film (90) contacts the common line. With this configuration, the drive voltage is minimized and the generation of an afterimage is reduced (col. 3, lines 44-52). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the alignment film of Shin by forming the film in contact with a common line as taught by Kim to minimize the drive voltage and reduce an afterimage in an LCD device.

In re claims 2, 3, 7, and 8, Kim discloses (col. 48-52) that the alignment film is formed of polyimide resin and had has a thickness of 700 Angstroms. The dielectric constant is inherently 3 because the material of Kim's alignment film is the same as the instant invention.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US 6,271,903) in view of Kim (US 6,177,970 B1) as applied to claim 4 above, and further in view of Kim et al. (US 6,388,727 B2).

In re claim 5, Kim '970 already shows (fig. 2) that the pixel electrode (810) and common electrode (310) are formed in the same layer. Shin and Kim '970 do not show that the common electrode is formed of transparent conductive material. Kim et al. 1727 teaches (col. 6, lines 21-26) that the common electrode may be formed of a transparent conductive material such as ITO. Therefore it would have been obvious to one of

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ordinary skill in the art at the time the invention was made to modify the pixel and common electrodes of Song and Kim '970 by using a transparent material such as ITO because Kim et al. '727 teaches that such materials are suitable for simplifying LCD devices.

Response to Arguments

Applicant's arguments with respect to claims 1-5, 7, and 8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Son et al. (US 6,400,435 B2) also shows that an alignment film contacts source and drain electrodes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Warren whose telephone number is (571) 272-1737. The examiner can normally be reached on Mon-Thur and alternating Fri 9:00-5:00pm.

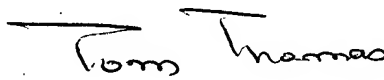
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEW

June 16, 2005


TOM THOMAS
SUPERVISORY PATENT EXAMINER